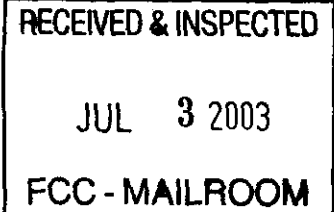




DOCKET FILE COPY ORIGINAL

Florida Power & Light Company, P.O. Box 029100, Miami, FL 33102-9100



Writer's Direct Dial:
(305) 552-3929

July 2, 2003

By Federal Express

Marlene H. Dortch, Secretary
Federal Communications Commission
Office of the Secretary
9300 East Hampton Drive
Capitol Heights, MD 20743

**Re: In the Matter of Inquiry
Regarding Carrier Current
Systems Including Broadband
over Power Line Systems
ET Docket No.: 03-104**

Dear Ms. Dortch:

Enclosed herein please find an original and ten copies of the Comments of Florida Power & Light Company in ET Docket No. 03-104. Also, enclosed is an additional copy of the first page of said document. Please have your staff date stamp the copy of the first page and return it in the self-addressed, stamped envelope which has been provided for your convenience.

Thank you.

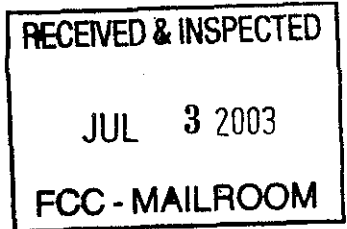
Yours very truly,


Jean G. Howard
Senior Attorney

JGH/cam

Enc.

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Before the
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

In the Matter of)
)
Inquiry Regarding Carrier) ET Docket No. 03-104
Current Systems)
Including Broadband)
over Power Line Systems)
)
)
To The Commission)

COMMENTS OF FLORIDA POWER & LIGHT COMPANY

FLORIDA POWER AND LIGHT COMPANY

By: Jean G. Howard
9250 West Flagler Street
Miami, Florida 33174
Telephone: (305)552-3929

Its Attorney

July 7, 2003

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of)
)
Inquiry Regarding Carrier) ET Docket No. 03-104
Current Systems)
Including Broadband)
over Power Line Systems)

COMMENTS OF FLORIDA POWER & LIGHT COMPANY

I. Introduction

Florida Power & Light Company ("FPL"), pursuant to the rules and regulations of the Federal Communications Commission ("Commission" or "FCC"), 47 C.F.R. §§ 1.415 and 1.419, submits these comments in response to the Commission's Notice of Inquiry Regarding Carrier Current systems, including Broadband over Power Line Systems, released on April 28, 2003.¹

FPL is a corporation organized and existing under the laws of the State of Florida and is a principal subsidiary of FPL Group, Inc.² FPL is regulated by the Florida Public Service Commission ("FPSC") and the Federal Energy Regulatory Commission ("FERC"). FPL owns a 69,000 mile interconnected power line network made-up of large and small power lines with nearly four

¹ ET Docket, No. 03-104, (April 28, 2003). FPL adopts the comments filed by Hawaiian Electric Company ("HECO") filed in this docket, as modified herein.

² See www.FPL.com and www.FPLGroup.com.

million customers (accounts) serving approximately eight million persons within its service territory consisting of approximately 27,600 square miles in all or part of thirty-five Florida counties. FPL is a member of the United Telecommunications Council's United PowerLine Council ("UPLC").³

II. BPL is a viable technology

FPL's interest in BPL started in 1998, when it performed access and in-home characterization analysis of BPL in areas of multiple and single-dwelling residential homes, in both overhead and underground configurations. Results demonstrated that power line medium was a feasible media for both access and in-home high-speed data communications. However, based upon signal reach and resulting telecom throughput, FPL's pursuit of BPL was put on hold while the industry addressed certain key design challenges, namely speed and the issue of a cost effective transformer bypass solution. FPL continued to monitor the technology, and in 2002, conducted an evaluation of BPL vendors, primarily through white paper analysis. A high level business case was reviewed and consequently FPL is developing plans for a live beta trial. FPL believes that BPL benefits customers and

³ UPLC - United Power Line Communications Council is a sub-organization within the United Telecommunications Council (UTC) organization.

offers an attractive business proposition both to the utility and other market participants.

III. BPL Promotes Facilities-based Competition

Access BPL promotes facilities-based competition and creates opportunities for Internet Service Providers (ISPs) or communications companies that do not have last mile facilities, to partner with or lease or license the BPL infrastructure, thereby, encouraging further deployment of and access to these technologies. Because BPL will use the electric line which already reaches the customer, a BPL enabled telecom circuit may be provisioned in significantly less time than that of existing solutions, better meeting customer service levels and expectations. Every electrical outlet could become part of a home-based, symmetrical internet network, with no new wiring or re-wiring. By leveraging existing wired utility assets, BPL potentially offers a lower cost medium that may enable tiered Internet services at prices that dial-up customers will find attractive. Moreover, with expanded utility uses, such as advanced metering, BPL also may provide expanded services and links to customers that are currently not attractive or economical for existing broadband services providers.

IV. BPL Enhances Utility Service, Reduces Costs

FPL has a great interest in the potential of BPL to enhance utility operations and to reduce costs of utility operations, benefiting the FPL customers. Enhanced utility operation functions occur as a result of access BPL—the presence of BPL signals on the utility medium and low voltage distribution network. BPL injection/repeater devices will have the capability of detecting signal patterns that occur prior to breakdown of electrical grid elements, such as faulty conductors, low voltage transformers, capacitors, fuse devices, etc. As these BPL detection technologies develop and mature, the BPL bandwidth availability can presently be used to extend traditional utility SCADA (Status, Control And Data Acquisition) throughout the utility power grid. Such a deployment would improve customer service, and system reliability and minimize, if not eliminate, customer reliance for outage notification. Existing low-speed power line communication (low speed PLC) technologies do not afford these capabilities. Thus, predictive failure analysis and the potential physical “reach” of BPL are side benefits of BPL deployment that could lead to reliability and service improvements to utility customers. Other potential utility applications include: communications for distribution automation, distributed generation, distribution data

acquisition, disaster recovery, system protection, and diagnostic monitoring.

In addition from an operations perspective, BPL's high speed capacities will allow FPL to improve its infrastructure security, better ensure public safety, and provide more timely responses to customer outages. This is increasingly important due to classification by the United States government of specific public and private infrastructure assets, such as electric utility assets, under MEVA⁴ guidelines. Under MEVA, FPL is responsible to ensure secure infrastructure power for federal facilities, including military bases, and state, city, and local government. BPL is envisioned as a boon to economically expand the utility communications infrastructure, enabling applications such as electric facilities' video surveillance to ensure security and public safety. The physical reach of an electrical grid itself creates the opportunity to provide enhanced security services such a video surveillance in a cost effective manner becomes a feasible economic option. The potential of creating wireless hotspots to key security and operational personnel, many time in remote locations, offers the opportunity for improved system management, faster problem detection and system

⁴ MEVA - Mission Essential Voluntary Assets established by Presidential order as part of the Homeland Security policies framework.

restoration. In many cases of natural disaster, the electrical grid is returned to normal operational prior to traditional communication means, potentially providing a key element in aiding response teams.

In-house BPL also has the potential to provide enhanced customer service applications which have not previously been economically viable. These include: load control/demand response, time-of-use rates, load profiling, outage detection, meter theft monitoring, and remote start/stop. These, coupled with the enhanced utility operations applications, provide a strong business case for deploying BPL for utility needs. The utility uses generally only consume small bandwidth, leaving a significant bandwidth available for consumer level broadband applications, such as Internet service or Voice Over Internet Protocol (VoIP) telephony. The latter services further bolster FPL's prospective BPL business case.

The combination of utility applications and potential to provide consumer Internet/Voice services is in the best interests of the utility's customers and corporate shareholders. No other technology is available that leverages existing assets (utility distribution facilities) and provides enormous potential for economical customer connectivity.

The key enabler to any successful utility telemetry based application, from a business case perspective, is a pervasive deployment. Key elements such as signal reach, chipset cost (and competition in that space), product standards, ease of installation and maintenance will drive down cost enabling a broader deployment. The prospect of having a truly connected home/business/device, to both a broadband network, with cost effective telemetry capability, will create a market for new products and services, foster competition, with enhanced consumer experience and enhance national security.

V. BPL Interference is a Low Risk

Based on the following, FPL believes that BPL does not pose significant risks for unintended high frequency radiations that will interfere with consumer devices, amateur radio operators, or other forms of commercial communications (television, radio, mobile radio, etc.):

- *Equipment vendors will FCC-certify their access and in-home BPL technologies.* Many BPL vendors have now completed their extensive FCC compliance certification and in turn can now affix the FCC stickers on the access BPL equipment. Vendors also design their implementation based on meeting existing FCC radiated emissions compliance requirements. In addition, BPL vendors have demonstrated sincere efforts

to ensure that their technology, provisioned as an unintentional radiator, does not interfere with FCC-regulated radio bands and will indeed meet FCC Part 15 requirements.⁵

- *Consumer products are FCC Part 15 certified.* The BPL vendors that FPL has or presently is considering testing use FCC certified WiFi (802.11b) or HomePlug™ 1.0 compliant bridges, routers, and adapters from companies such LinkSys, NetGear, and Siemens.
- *Powerline carrier solutions.* FPL has deployed one of the largest powerline carrier based solutions in the United States, utilizing TWACS technology from DCSI for a major demand side management solution. Our prior testing, and that of other companies, has indicated there is no impact on the operation of this system by the introduction of BPL technology.

⁵ FCC Order 97-Section 157 essentially places the burden on BPL opponents to justify why a new entrant or technology that may provide more affordable telecommunications to a broader base of customers, should not be approved. FPL believes that arguments voiced by amateur radio forums do not meet this burden, and remain unsubstantiated and speculative without direct evidence that BPL vendors' technologies cause interference in excess of approved limitations established by FCC guidelines.

- *Extensive safety checks on overhead (aerial) and underground equipment.* FPL believes the access and in-home BPL technologies can be safely and reliably installed and operated. FPL has trained its crews to safely install BPL equipment used in upcoming trials. FPL teams paid special attention to ongoing safety concerns, such as distribution line coupling, pole attachment clearances, powering options, appropriate fusing, etc. In addition, with UL-approved and FCC-certified CPE devices, FPL feels that safety and interference concerns are additionally being addressed. These devices are plug and play units, very similar to cable and DSL modems.

FPL believes that existing FCC Part 15 radiated compliance rules sufficiently govern both access and in-home BPL technologies. FPL also supports elimination of conducted limits, as radiated emissions are the true indications of interference potential.

Conclusion

Existing Commission guidelines are sufficient. Conducted limits should be eliminated. The Commission's encouragement of utility investment and trial deployment, potentially leading to BPL commercialization, is appropriate and justified. FPL individually and as a UPLC member commends the Commission for

recognizing the potential for BPL technology and its efforts with the subject NOI. FPL looks forward to an outcome that permits utilities to leverage their assets and provide a new broadband medium that will serve the public good, while further stimulating broadband competition.

Respectfully submitted,

Florida Power and Light Company,

By: 

Jean G. Howard
Senior Attorney
9250 West Flagler Street
Miami, Florida 33174
Telephone: (305) 552-3929

July 7, 2003

CERTIFICATE OF SERVICE

I, Jean G. Howard, hereby certify that on this 2nd day of July, 2003, an original and ten copies of the foregoing Comments of Florida Power & Light Company in ET Docket No. 03-104 were mailed by Federal Express for overnight service on:

Marlene H. Dortch, Secretary
Federal Communications Commission
Office of the Secretary
9300 East Hampton Drive
Capitol Heights, MD 20743

And one copy by U.S. mail on:

Anh Wride, Senior Engineer, OET
Federal Communications Commission
445 12th Street, S.W., Room 7a, 125
Washington, D.C. 20554



Jean G. Howard
Senior Attorney